

IN THE SPECIFICATION:

Page 10, lines 18-21:

The series circuit of relay coil 218 and SCR 224 is connected between power supply ~~36-15~~ and a neutral terminal, and the gate terminal of the SCR is coupled to the output terminal of SCR trigger circuit-~~236~~ 216. The output of pin 1 of IC 225 is the input to the SCR trigger circuit-~~236~~ 216.

Page 10, line 28 – Page 11, line 13:

Line side electrical conductors, phase conductor 14 and neutral conductor 18, pass through the transformers 233, 234 to the load side phase and neutral conductors. Relay coil 218 is coupled to operate contacts 231, 232, associated with the phase and neutral conductors, respectively, which function to open the circuit in the event a fault is detected. The coil 218 of the relay is energized when the SCR 224 is turned on by a signal from the trigger circuit-~~236~~ 216. In addition, the circuit comprises a test circuit comprised of momentary push button switch 228 connected in series with resistor 230. When switch 228 is pressed, a temporary simulated ground fault from load phase to line neutral is created to test the operation of the device.

Inductors 20, 30 are coupled in series with conductors 14, 18 and downstream of the input to the power supply 36. The two inductors are inductively coupled to each other and inductor 20 is connected to feed a signal representative of the derivative (di/dt) current in the conductors to the arc fault detector 24 as described above. The microcontroller of the arc fault detector can be a stand alone component or it can be a part of the IC 225 of the ground fault circuit interrupter. If the microcontroller is a stand alone component, the trip signal generated by the microcontroller is fed to the SCR trigger circuit-~~236~~ 216. If the microcontroller is a part of IC 225, the trip signal is the TRIG-GFCI signal from IC 225.